52. (New) The pharmaceutical agent of claim 46 wherein the weight percentage of plant extract in the agent is in the range of from about 70% to about 95%.

53. (New) The pharmaceutical agent of claim 46 further comprising a pharmaceutically acceptable carrier, diluent or excipient.

54. (New) The pharmaceutical agent of claim 46 wherein the therapeutically effective amount of plant matter has an amyloid inhibitory activity or efficacy greater than 50%.

REMARKS

Claims 1 - 43 are pending the application; Claims 1 - 13 stand rejected under 35 USC §§112, 102a and 102b; Claims 14 - 43 stand withdrawn as drawn to non-elected inventions. By this Amendment Claim 9 is amended, withdrawn claims 14 - 43 are canceled without prejudice and new claims 44 - 54 have been added; these new claims add no new matter to the application. The new claims address novel and non-obvious subject matter which are statements of alternate claimed subject matter, and which it is believed will require no additional searching.

Claims 5, 6 and 9 stand rejected under 35 USC §112, as allegedly indefinite. Applicant respectfully traverses these claim rejections and addresses the Examiner's concern about whether the parenthetic material in these claims is to be included in the claim or not by affirming that all of the parenthetic material in each of these claims is to be included in the claim. The phrase "various forms of malignancy" in claim 9 has been expanded to "malignancy" to make it clear that any form of malignancy associated with AA amyloid is included within the ambit of the claim. New dependent claims 47 and 50 correspond to claims 6 and 9 and also contain parentheses; Applicant also affirms that all of the parenthetic material in each of these claims is to be included in the claim.

Claims 1, 9, 10 and 12 stand rejected under 35 USC 102(e) as allegedly anticipated by Pero; Applicants respectfully traverse these rejections and also address the following arguments

distinguishing Pero with respect to new claims 44-54. Pero was filed 2/27/97 and stands only as a 102(e) reference for an invention "described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant". In this case, Applicants' invention was made before 2/27/97 (see contemporaneously filed Rule 131 Declaration of Dr. Alan D. Snow). Applicants' invention was conceived on a date earlier than the 2/27/97 application date of the Pero reference, and thereafter diligently reduced to practice. Constructive reduction to practice was achieved at least as early as the date of the provisional application on which the present application is based, that is application 60/046,602 filed 5/15/97. Therefore Pero is not a proper 102(e) reference, and Applicants request that these rejections be withdrawn.

Claims 1-10, 12 and 13 stand rejected under 35 USC 102b as allegedly anticipated by the Keplinger '725 reference; Applicant respectfully traverses these rejections. Applicant respectfully points out that Keplinger has nothing in common with the rejected claims except for the mention of the plant species *Uncaria tomentosa* and the oxindole alkaloids. The cited reference concerns itself only with stimulation of the human immunological system to increase resistance to viral and tumorous diseases, and not at all with Alzheimer's disease or any other amyloidosis. In contrast, Applicant has developed and disclosed entirely new and previously undisclosed technology in the nutraceutical and pharmaceutical fields of treatment of Alzheimer's disease and other amyloidoses in patients by the introduction of selected therapeutic quantities of *Uncaria* and *Uncaria tomentosa* to the patients. Applicants have reported by way of Examples in the specification that extracts from *Uncaria tomentosa* are surprisingly effective as amyloid protein inhibitors, and amyloid protein inhibition is at least one aspect of treatment of amyloid diseases. This surprising effectiveness of *Uncaria tomentosa* as a therapeutic for amyloid diseases has never been previously suggested; no one else has ever suggested that plant matter from any of the species of *Uncaria* would have any efficacy in the treatment of any amyloid disease. The claims to use of plant matter from *Uncaria* plants for the treatment of Alzheimer's disease and other amyloid

diseases are therefore entirely novel, and do not withdraw from the public domain any right to which the public was entitled. The public has never previously had suggested to it that amyloid patients might benefit from therapeutical quantities of *Uncaria* plant matter, and that suggestion is manifestly not inherent in the Keplinger disclosure.

The Examiner readily acknowledges that Keplinger "does not teach administering the *Uncaria tomentosa* extract for treating amyloid diseases as claimed by applicant". Instead the Examiner asserts that the composition of Keplinger is identical to the claimed composition, and that therefore Keplinger would "inherently have the same effects on the human body as the claimed composition." The Examiner also relies upon two CCPA cases for the propositions that limitations recited in a claim's preamble are allegedly not entitled to patentable weight when they merely recite intended uses of a product fully described in the body of the claim, and that a claim's limitations are allegedly met in the prior art if the prior art structure is capable of performing the intended use.

Applicant asserts that in this case of a pharmaceutical or nutraceutical composition, a novel intended use, regardless of whether the recitation of that use appears in a claim's preamble or not, is a critical limitation of the claim and fully entitled to patentable weight, especially where, as here, the public's pre-existing right is not diminished by the claimed subject matter. The right conferred upon the public (after expiration of Keplinger's patent of course) is the right to administer *Uncaria tomentosa* extracts for immunostimulation as summarized above. Applicant submits that no amount of the immunostimulation use of *Uncaria tomentosa* extracts will infringe any of the claims here presented, as the claims require explicitly that the *Uncaria* plant matter be expressly selected for its efficacy in treating amyloidoses.

A review of the *Casey* and *Otto* cases cited by the Examiner suggests that these cases are for the most part inapt to the present application. *Casey* dates back to 1967 and addresses a claimed tape dispenser machine that used an identical mechanical structure to that disclosed in a

tape perforating machine, and *Otto* addresses a hair curling apparatus the elements of which were presented in various other hair curling devices. Both cases then turned on the propriety of using process- or method-like limitations in an apparatus claim to distinguish over the prior art; while it was then thought improprietous to do so, current patent practice does permit such limitations in appropriate circumstances. These cases are thus distinguished from the present case and do not suggest or control the outcome of this case. In addition, these cases were addressed strictly to machinery, and Applicant is not aware of any suggestion that composition claims, especially pharmaceutical claims, should be treated as machine-type claims in this regard. Indeed current public policy would weigh against any such similarity of treatment, for the earnest pursuit of cures to some of the worst conditions known to man requires no less than that inventors be encouraged to explore all potential cures, including those involving known compounds suspected of being efficacious in entirely unrelated conditions. And it is only the ultimate grant of patent for such cures that provides such encouragement.

Significantly, in the *Casey* case relied upon by the Examiner, the court cited and quoted with approval the case of *In re Neugebauer*, 330 F.2d 353, 141 USPQ 205, for the proposition that courts in fact "know no general rule for deciding the weight to be given preambles as positive structural limitations. [emphasis added]" The *Casey* case not only does not support the Examiner's determination to accord no patentable weight to the express use limitation contained in the preamble to Claim 1, it even undercuts it. For if there is no general rule as to the force and effect of limitations contained with claim preambles, then there is no rule that would support ignoring such limitations entirely in determining patentability, as the Examiner has determined to do here.

Indeed, and again in the same *Casey* case relied upon by the Examiner, the *Neugebauer* case is again quoted for saying, "The claims as a whole must be analyzed in light of the disclosure to see if the article defined thereby is distinguishable in fact, *vis-a-vis in verbis*, over the prior art.

[emphasis added]" Applicant respectfully submits that this is the correct standard for patentability in cases like this. Applying this correct standard, it is submitted that Claim 1 and its dependents are fully distinguished over Keplinger because Claim 1 and its dependents "as a whole", and "in light of the disclosure", define a newly discovered treatment for the dreaded amyloid diseases, including Alzheimer's disease, that was never contemplated or suggested by Keplinger or any other reference of record, and but for the work of the inventors and this disclosure, would perhaps never be disclosed or made available to sufferers of these terrible diseases. Certainly no amount of luck could have contrived to put knowledge of this treatment for Alzheimer's disease into the hands of a reader of Keplinger's patent, and no amount of the administration of Keplinger's immunostimulation compounds could have put knowledge of this treatment for amyloidosis into the hands of any of the patients given his compounds. Claim 1 and its dependents as a whole define a novel pharmacological agent made from plant material selected for its therapeutic efficacy against the amyloid diseases, whereas Keplinger discusses only immunostimulation compounds that happen to be extracted from the same plant.

The Examiner also makes passing reference to the notion that Keplinger's immunostimulation compounds would "inherently" have same effects on the human body as the claimed composition. She cites no authority however for the proposition that such inherence somehow defeats or negatives novelty in a claim. Indeed there appear to be two separate lines of authority with respect to notions of inherence as bars to patentability. In one line, certain claim elements, not expressly contained in a cited prior art reference are said to be inherently present in the structure disclosed in the reference and that the claim therefore reads fully upon the reference. For instance in *Atlas Powder v. Ireco*, 190 F.3d 1342; 51 USPQ 2d 1943 (Fed.Cir. 1999), a case involving explosive formulations, certain claimed formula ingredient (aeration) ranges were determined to be inherent in the prior art structures of similar explosives. Implicitly in the *Atlas* case and others like it, the public policy of not depriving the public of rights given in

a prior art disclosure is upheld, because it was determined in effect that every user or manufacturer of the prior art explosive would necessarily be infringing the new claim if it was allowed over the prior art reference.

But in another line of cases, quite different from the *Altas* type cases, application by the Patent Office of inherence as a ground of rejection is reversed because the mere possibility of inherence is not the same as inherence in fact. For instance in *In re Robertson*, 169 F.3d 743; 49 USPQ 2D 1949 (Fed.Cir. 1999), a case involving diaper fasteners, the court reversed a Board of Patent Appeals affirmation of an inherence rejection of claims, saying, "To establish inherence the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.[emphasis added]" The court also said, "Inherency however may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. [emphasis added]"

Claim 1 and its relation to the Keplinger reference presents a case within the ambit of this *Robertson* type of case. While it might be the case (but which Applicant must here deny, since it is not established and probably can not be established) that a dose of Keplinger's immunostimulation compound could have a therapeutic effect on a patient having an amyloid condition, it is only speculative at best, a mere possibility, and therefore not "necessarily present" in Keplinger's reference. And even if it could be said to be necessarily present, it would certainly not be "so recognized by persons of ordinary skill" as that ordinary level of skill has to be defined prior to the claimed invention. No one skilled in the art as it stood before the present invention would have recognized the anti-amyloid properties of any of Keplinger's immunostimulation compounds. This is just the type of situation comptemplated by the *Robertson* court, in that the public is in no danger in this case of losing something they had before; they had *Uncaria* for immunostimulation; now they have *Uncaria* as a treatment for amyloidosis. There is no conflict

and no loss of public right, only gain. Thus under the *Robertson* line of cases, and the correctly understood public policy considerations underlying inherence determinations, inherence could not be applied to read into Keplinger's disclosure any efficacy for *Uncaria* extracts as therapeutics for amyloidoses. Since such a surprising efficacy was not necessarily contained in Keplinger's disclosure, and on one skilled in the art would have so recognized any such new efficacy, Claim 1 and its dependents are therefore distinguished over Keplinger, and their rejection should be reconsidered and withdrawn.

Indeed in the seminal inherence case of *In re Shetty*, 566 F.2d 81; 195 USPQ 753 (CCPA 1977), a case reversing the Board of Appeals application of the doctrine of inherence as to claims drawn to an appetite suppressant and rejected over an similar compound that functioned as an antiviral agent, the venerable Judge Rich says, "The inherency of an advantage and its obviousness are entirely different questions. That which may be inherent is not necessarily known. Obviousness cannot be predicated on what is unknown." He also says that inherency "is quite immaterial if ... one of ordinary skill in the art would not appreciate or recognize that inherent result." This view survives to the present and is the same as that expressed in the *Robertson* case discussed above.

The newly claimed subject of claims 44-54 matter is also distinct from the Keplinger reference. New claim 44 is expressed without preamble; therefore the Examiner's concerns about preamble limitations are not applicable to claims 44-54. The newly claimed subject matter is also not "inherent" in any of Keplinger's disclosure, for all the same reasons as discussed above with respect to Claim 1. Claims 44-54 are therefore also distinguished over the art of record and Applicant requests entry and early favorable action on these claims.

Claims 1-6, 9, 12 and 13 stand rejected under 35 USC 102b as allegedly anticipated by the Stuppner reference; Applicant respectfully traverses these rejections. With the exception that Stuppner discloses only the applicability of his compounds for arthritis, viral diseases and cancer,

differing from the Keplinger disclosure, Applicant here restates all of the arguments made above to overcome the Keplinger rejections as though fully set forth here to overcome the Stuppner rejections as well, and requests that these rejections be reconsidered and withdrawn as well.

Claims 1-3 and 11 stand rejected under 35 USC 103 over Keplinger and alternatively Stuppner; Applicant respectfully traverses these rejections. The Examiner acknowledges that neither Keplinger nor Stuppner "teach administering a composition that contains 70 to 95% of *U. tomentosa*" for any purpose whatever, not even for immunostimulation. Instead the Examiner maintains the rejection, asserting that "The amount of an active ingredient in a composition is clearly a result effective parameter that a person of ordinary skill in the art would routinely optimize. Optimization of parameters is a routine practice that would be obvious for persons of ordinary skill in the art to employ." Applicant respectfully points out that this kind of "obvious optimalization" rejection has been reversed by the reviewing courts. See *In re Yates*, 663 F.2d 1054, 211 USPQ 1149, 1151 (CCPA 1981) ("when the PTO asserts that there is an explicit or implicit teaching or suggestion in the prior art, it must indicate where such a teaching or suggestion appears"); *In re Rijckaert*, 9 F.3d 1531; 28 USPQ 2d 1955 (Fed.Cir. 1993). The Examiner has shown no basis in the art upon which a person of ordinary skill could proceed with such an optimalization, as she is required to do.

In addition, the Examiner's rejection on this ground fails to take into account the fact that all of the base and intervening limitations of Claim 11 must be read into the claim in determining its patentability, and especially in an analysis like this, the accessability, not just of the optimization analysis, but also of <u>all</u> of the claimed limitations must be examined in light of the ordinary level of skill in the art. Thus, while optimization of some known compounds might be sometimes routine, optimization of a limitation in an otherwise novel set of claim limitations is never routine. *Yates*. Applicant submits that it would not have been obvious in view of either Keplinger or Stuppner to develop a pharmacological agent for treating an amyloid disease in a

patient, wherein the agent comprises a therapeutically effective amount of plant matter from a plant of the genus *Uncaria*, species *tomentosa*, wherein the plant matter comprises an extract obtained from *Uncaria tomentosa*, the extract being derived from the inner bark or root tissue of *Uncaria tomentosa*, and wherein the weight percentage of plant extract in the agent is in the range of from about 70% to about 95%. Taken as a whole, Claim 11 is not obvious over the cited references, and Applicant requests that these rejections be reconsidered and withdrawn.

Applicant believes that he has responded fully to all of the concerns expressed by the Examiner in the Office Action, and respectfully requests entry and examination of all new claims and early favorable action on them as well. If the Examiner has any further concerns, Applicant requests a call to Applicant's attorney Patrick Dwyer at (206) 343-7074.

Respectfully submitted,

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